## **CLAIMS**

What is claimed is:

- 1. A compound selected from compounds 8-a through 8-s, as shown in Table 8.
  - 2. An organic electronic device comprising at least one active layer between two electrical contact layers, wherein the at least one active layer comprises at least one compound selected from compounds 8-a through 8-s, as shown in Table 8.
- 3. The device of Claim 2 wherein the active layer is a light-emitting layer.
  - 4. The device of Claim 2 wherein the active layer is a charge transport layer.
- 5. An organic electronic device comprising an emitting layer having an emission maximum in the range of 570 to 700 nm, wherein at least 20% by weight of the emitting layer comprises at least one compound having a Second Formula below:

IrLaLbL'yL"z,

(Second Formula)

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where:

y is 1;

z is 0;

L' is a bidentate ligand, and is not a phenylpyridine, phenylpyrimidine, or phenylquinoline;

La and Lb are alike or different from each other and each of La and Lb has a structure selected from structure (XI) and structure (XII) below:

$$R_{18}$$
 $R_{19}$ 
 $R_{16}$ 
 $R_{10}$ 
 $R_{11}$ 
 $R_{12}$ 
 $R_{13}$ 
 $R_{15}$ 
 $R_{14}$ 
 $R_{14}$ 
 $R_{15}$ 

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where:

at least one of  $R_{10}$  through  $R_{19}$  is selected from F,  $C_nF_{2n+1}$ ,  $OC_nF_{2n+1}$ , and  $OCF_2X$ , where n is an integer from 1 through 6 and X is H, Cl, or Br;

$$\begin{array}{c|c}
R_{22} & R_{23} \\
R_{28} & R_{21} \\
R_{29} & R_{24} \\
R_{29} & R_{25}
\end{array}$$

$$(XII)$$

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where:

at least one of  $R_{21}$  through  $R_{30}$  is selected from F,  $C_nF_{2n+1}$ ,  $OC_nF_{2n+1}$ , and  $OCF_2X$ , where n is an integer from 1 through 6 and X is H, Cl, or Br.

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6. An organic electronic device comprising an emitting layer having an emission maximum in the range of 570 to 700 nm, wherein at least 20% by weight of the emitting layer comprises at least one compound having a Third Formula below:

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(Third Formula)

where:

La, Lb, and Lc are alike or different from each other and each of La, Lb, and Lc has a structure selected from structure (XI) and structure (XII) below:

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$$R_{18}$$
 $R_{19}$ 
 $R_{16}$ 
 $R_{10}$ 
 $R_{11}$ 
 $R_{12}$ 
 $R_{13}$ 
 $R_{19}$ 
 $R_{15}$ 
 $R_{14}$ 
 $R_{14}$ 

## wherein:

at least one of  $R_{10}$  through  $R_{19}$  is selected from F,  $C_nF_{2n+1}$ ,  $OC_nF_{2n+1}$ , and  $OCF_2X$ , where n is an integer from 1 through 6 and X is H, Cl, or Br;

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$$R_{28}$$
 $R_{21}$ 
 $R_{27}$ 
 $R_{24}$ 
 $R_{29}$ 
 $R_{30}$ 
 $R_{26}$ 
 $R_{26}$ 
 $R_{23}$ 
 $R_{24}$ 
 $R_{25}$ 
 $R_{25}$ 

## wherein:

at least one of  $R_{21}$  through  $R_{30}$  is selected from F,  $C_nF_{2n+1}$ ,  $OC_nF_{2n+1}$ , and  $OCF_2X$ , where n is an integer from 1 through 6 and X is H, Cl, or Br.

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- 7. A compound selected from compounds 9-a through 9-l, as shown in Table 9.
- 8. An organic electronic device comprising an emitting layer having an emission maximum in the range of 450 to 500 nm, wherein at least 20% by weight of the emitting layer comprises at least one compound having a Sixth Formula below:

IrLaLbL'L"

(Sixth Formula)

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where

L' is selected from a phosphine, an isonitrile, and carbon monoxide;

L" is selected from F, Cl, Br, and I;

La and Lb have structure (I) below,

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$$R_7$$
 $R_8$ 
 $R_5$ 
 $R_1$ 
 $R_2$ 
 $R_3$ 
 $R_4$ 
 $R_4$ 
 $R_4$ 

## wherein:

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R<sub>1</sub> through R<sub>8</sub> are independently selected from alkyl, alkoxy, halogen, nitro, cyano, fluoro, fluorinated alkyl and fluorinated alkoxy groups, and at least one of R<sub>1</sub> through R<sub>8</sub> is selected from F, C<sub>n</sub>F<sub>2n+1</sub>, OC<sub>n</sub>F<sub>2n+1</sub>, and OCF<sub>2</sub>X, where n is an integer from 1 through 6 and X is H, Cl, or Br, and A is C.

- 9. The device of Claim 8 wherein L" is Cl, and L' is selected from triphenylphosphine; tris[3,5-bis(trifluoromethyl)phenyl]phosphine; 2,6-dimethylphenyl isocyanide; 3-trifluoromethylphenyl isocyanide; and 4-toluenesulfonylmethyl isocyanide.
- 10. The device of Claim 8, wherein the compound is selected from compounds 9-a through 9-l, as shown in Table 9.
  - 11. A compound selected from compounds 12-a through 12-j as shown in Table 12.